HOLDEN MINE REMEDIATION PROJECT

Another major milestone was reached earlier this month as crews successfully completed Segment 1 of the Railroad Creek realignment. The creek now flows in the newly constructed creek bed, located away from the tailings piles to allow for future construction of a barrier wall at the base of the tailings piles. Crews will continue to work on site through early November, focusing their efforts on the completion of the Copper Creek diversion, the barrier wall platform, and winterizing the site for erosion control.

Looking northeast from Tailings Pile 1. You can see the lower breach of the super sacks with water flowing into the new channel at the top of the photo.

Current Construction Activities:

Railroad Creek Realignment: On October 8th the contractors removed the pumps and super sacks located at the inlet to the relocation Segment 1 of Railroad Creek, allowing water to flow into the new alignment. The dewatering well equipment has been removed and the wells abandoned. The disturbed areas along banks of the Railroad Creek realignment area received seed and hydro mulch, along with other winterization measures.

Tailings Pile 1 Grading: Contractors have finished grading Tailings Pile 1 for the 2013 construction season. The grading involved utilizing an excavator to load trucks and haul the tailing to Tailings Pile 3 to be spread and compacted. A temporary cover was placed over the newly graded Tailing Pile 1.

for the greatest good

Graded surface in south central portion of Tailings Pile 1

Copper Creek: Copper Creek has essentially ceased flowing, as it normally does by this time of year. The creek has been temporarily diverted to reduce the risk of tailings eroding into Copper Creek. Contractors have installed "mega ditch" panels in the temporary east diversion area. The contractor has also placed and compacted fill in the Copper Creek channel to prepare the original channel for the final configuration next year. Additionally, contractors are constructing the tie-in from Copper Creek to the newly realigned Railroad Creek channel.

Mill Structure Demolition: The superstructure for the Mill has been dismantled. Excavators with hydraulic hammer attachments are being used to demolish concrete, while excavators and articulated trucks remove demolition debris from the work area. A bench is prepared for placing demolition debris within the former Mill Structure area. The demolition debris is then returned to the Mill structure footprint, covered and compacted with waste rock.

Borrow Material and Material Production:

- **Ten Mile Quarry:** Blasted rock continues to be hauled from the Quarry to Lower West Ten Mile borrow area for processing.
- **Lower West Ten Mile:** Crews continue to haul aggregate and riprap from the area for use in construction along Railroad Creek Realignment and barrier wall platform protection.
- **Dan's Camp Borrow:** River rock is hauled from the borrow site to Railroad Creek construction areas.

Barrier Wall Platform: The construction of the barrier wall working platform continues below the toe of the second tailings pile. Excavators are used to remove contaminated tailings materials and reach underlying river sands and cobbles. Excavated material is transported and spread at a material consolidation area located on top of the western edge of Tailings Pile 3. Riprap was continued to be placed along the south bank of Railroad Creek to protect the barrier wall platform from fluvial erosion. These areas were planted with willows and other riparian seedlings as the riprap was being placed.

Dangerous/Hazardous Waste: The final polychlorinated biphenyl (PCB) storage container was transported from the PCB storage area to Lucerne and barged to Chelan to be picked up for final disposal.

Looking downstream at Railroad Creek water in new channel

Demolition debris placement – placement of scrap metal prior to covering with waste rock

Demolition – Demolishing concrete in the Mill Structure

Tailings Pile 1 Regrading – Placement of tailings excavated from the south-central portion of Tailings Pile 1 to the southwestern portion of Tailings Pile 1